Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1. (Original) A multivalued information recording method in which energy applied to information units on a recording medium is varied to record multivalued information,

wherein in accordance with a relationship between multivalued information in a predetermined information unit and multivalued information in both of information units adjacent the predetermined information unit, the energy to be applied to the predetermined information unit is decided.

2. (Original) A multivalued information recording method wherein the applied energy is light, and to vary the applied energy, power and/or an application time of the light is varied.

3. (Original) A multivalued information recording method according to claim 1,

wherein when an information value to be recorded into the information unit and serving as a reference is i and an average of information values to be recorded into the adjacent information units is i', the applied energy is decided in correspondence with (i' - i).

4. (Currently Amended) A multivalued information recording method ~~in which~~according to claim 1, wherein by varying power of light applied to information units on [[a]]the recording medium, widths of recorded marks are varied to thereby record multivalued information,

~~wherein~~ when the marks are recorded into the information units, an application time of the light is varied based on a relationship contradictory to the power of the light.

5. (Original) A multivalued information recording apparatus in which energy applied to information units on a recording medium is varied to record multivalued information, comprising:

a register in which multivalued information to be recorded is stored;

decision means for deciding the energy to be applied to a predetermined information unit in accordance with a relationship between multivalued information in the predetermined

information unit and multivalued information of both of information units adjacent the predetermined information unit; and

an optical head for applying the decided applied energy to the recording medium.

6. (Currently Amended) A multivalued information recording apparatus ~~in which~~according to claim 5, wherein by varying power of light applied to information units on [[a]]the recording medium, widths of recorded marks are varied to thereby record multivalued information, ~~comprising:~~

~~control means for varying~~ when the marks are recorded into the information units, an application time of the light is based on a relationship contradictory to the power of the light ~~when the marks are recorded into the information units; and~~

~~an optical head for applying the light to the recording medium based on a signal decided by the control means~~.

7. (Original) A recording medium having information units in which information is recorded in a multivalued manner by different energies being applied thereto,

wherein a condition of a mark recorded in a predetermined information unit is adjusted in accordance with a relationship between multivalued information in the predetermined information unit and multivalued information in both of information units adjacent the predetermined information unit.

8. (Previously Presented) A method for recording a sequence of multivalued data on a recording medium, comprising the steps of:

(a) receiving the sequence of multivalued data;

(b) representing the sequence received in step (a) by a sequence of power levels;

(c) grouping the sequence of power levels in step (b) into groups, with each group having first, second and third consecutive power levels from the sequence of power levels;

(d) modifying the second power level in each group by a derived value dependent on the first and third power levels in the group; and

(e) recording on the medium the sequence of power levels of step (b) after being modified by step (d).

9. (Previously Presented) The method of claim 8 wherein step (d) includes the steps of:

averaging the first and third power levels to obtain an averaged power level;

differencing the averaged power level and the second power level to obtain a difference; and

multiplying the difference by a predetermined factor to obtain the derived value.

Respectfully submitted,

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